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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/255,432

04/16/00

TERADA

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092,1827/001

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700 ELEVENTH STREET NW
WASHINGTON DC 20001

PM82/1128

EXAMINER

NGUYEN, I

ART UNIT	PAPER NUMBER
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3661

DATE MAILED:

11/28/00

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/265,432

Applicant(s)
Terada et al

Examiner
Thu Nguyen

Group Art Unit
3661



- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-16 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-16 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The drawing(s) filed on Mar 10, 1999 is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☒ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☐ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3 & 4
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

- a. The nozzle 3 disclosed in the specification page 7, line 8 is not found in figure 2.
- b. The element “11e” in figure 3 should be corrected to element “11c” so that the description in the specification page 8, line 18; page 9, lines 5, 20, 24; page 10, lines 2, 8, 9, 21, 23, and page 11, line 5 is matched.

Correction is required.

Specification

2. The disclosure is objected to because of the following informalities:

The disclosure in page 12, last two paragraphs: “Further, when cutting a saddle ... is not driven” seems to be contradictory. Paragraph “Further, when cutting ... similar to the second embodiment” discloses that the variable axis should be driven. However, paragraph “According to the third embodiment ... variable axis of the robot is not driven” discloses that the variable axis should not be driven to improve accuracy. These two paragraphs seem contradict to each other. Explanation is required.

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Claim Rejections - 35 USC § 112

3. The following is a quotation of the fourth paragraph of 35 U.S.C. 112:

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

4. Claim 10 is rejected under 35 U.S.C. 112, fourth paragraph, for failing to limit the subject matter of its parent claim. The claimed "A robot system" in line 1, claim 10 does not further limit the method of claim 9.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Bannister (EP 0265661).

As per claim 1, Bannister discloses a robot system which comprises a movable arm including a plurality of links (fig.2) and is controlled by a robot controller C3 (page 4, second column, line 24-28); and a tool unit 14 (fig.2) having a effecting end biased with respect to a final rotational axis 23 (fig.2) and is directed to the final rotational axis (fig.2).

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As per claim 2, Bannister discloses including a wrist 19 (fig.2) and providing the final rotational axis 26 (fig.2) at the wrist.

7. Claims 3-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Roder (U.S Patent No. 4,694,139).

As per claim 3, Roder discloses a robot system which comprises: a movable arm with a plurality of links X, Y, Z (fig.1), the movable arm is controlled by a robot controller (col.3, lines 9-13, lines 22-30; col.15, lines 65-68); and a tool unit (46, 15, 16, fig.11) mounted on a distal end of the movable arm and having an effecting end (15, fig.7) and a variable axis (11 fig.11) for varying a position or direction of the effecting end with respect to a final rotational axis 4 (fig.7) of the movable arm (col.13, lines 29-44).

As per claim 4, Roder discloses including a linear axis 17 (fig.11) (col.10, lines 8-14).

As per claim 5, Roder discloses that the linear axis 6 (fig.11) allows the effecting end 15 (fig.11) to move in perpendicularly with the final axis 4 (fig.11).

As per claim 6, Roder discloses including a rotary axis 11 (fig.11).

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As per claim 7, Roder discloses including a linear axis 6 (fig. 11) and a rotary axis 11 (fig. 6) to the variable axis 12, 17 and 11 (fig. 11).

As per claim 8, Roder discloses a robot system which comprises a movable arm with a plurality of links X, Y, Z (fig. 1), the movable arm is controlled by a robot controller (col. 3, lines 9-13, lines 22-30; col. 15, lines 65-68); and a tool unit 8, 15 (fig. 29) mounted on the distal end of the movable arm 17 (fig. 29). The tool unit has an additional rotational axis 8 (fig. 29) bias with respect to the final rotational axis 17 (fig. 29) of the movable arm and the effecting end 15 (fig. 29) is biased with respect to the additional rotational axis 8 (fig. 29) and is directed to the additional axis 8 (fig. 29).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roder (U.S. Patent No. 4,694,139).

As per claim 9, 11, Roder discloses a method of machining a workpiece, the method comprises the steps of: aligning the workpiece so that it is aligned with the central axis of the final

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rotational axis 4 (fig.15); and rotating the final rotary axis to perform machining on the workpiece (Col.11, lines 2-4). Roder does not disclose aligning the workpiece so that the central axis of the workpiece is aligned with the central axis of the final rotational axis. However, Roder discloses a link 49 with adjustable length (arrow 48 (fig.15)), it would have been obvious to a person of ordinary skill in the art at the time the invention was made to align the central axis of the workpiece to the rotational axis of the final rotational axis by adjusting the length 49 of the robot of fig.15.

As per claim 10, Roder discloses including a wrist 3 (fig.15) and the final rotational axis 17 (fig.15) at the wrist.

As per claim 12-15, refer to discussion in claims 4-7 above.

As per claim 16, refer to discussion in claim 3 and 9 above. Further, Roder discloses driving the variable linear axis in synchronism with the rotation of the final rotational axis to perform a hole cutting on the work piece (col.19, lines 52-58, lines 32-36).

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 305-7687, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive,
Arlington, VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 4:00 pm ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703)305-7687 .

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-1111.

TVN

November 17, 2000

James Louis Jones
JAMES H. LOUIS-JONES
PRIMARY EXAMINER